| | Application No. | Applicant(s) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Madian of Allawah 114. | 10/791,060 | PARK, JONG HUN |
| Notice of Allowability | Examiner | Art Unit |
| | Tuan T. Nguyen | 2824 |
| Th MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT I of the Office or upon petition by the applicant. See 37 CFR 1.31 | S (OR REMAINS) CLOSED in the community or other appropriate community or This application is sub- | nis application. If not included cation will be mailed in due course. THIS |
| 1. This communication is responsive to | | |
| 2. The allowed claim(s) is/are <u>1-8</u> . | | |
| 3. \boxtimes The drawings filed on <u>02 March 2004</u> are accepted by the | e Examiner. | |
| 4. Acknowledgment is made of a claim for foreign priority of a) All b) Some* c) None of the: 1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority of International Bureau (PCT Rule 17.2(a)). * Certified copies not received: | ve been received. ve been received in Application | No. <u>10/295,137</u> . |
| Applicant has THREE MONTHS FROM THE "MAILING DATE noted below. Failure to timely comply will result in ABANDON THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. | | reply complying with the requirements |
| 5. A SUBSTITUTE OATH OR DECLARATION must be submit NFORMAL PATENT APPLICATION (PTO-152) which gives | | |
| 6. CORRECTED DRAWINGS (as "replacement sheets") more (a) including changes required by the Notice of Draftspe 1) hereto or 2) to Paper No./Mail Date(b) including changes required by the attached Examine Paper No./Mail Date Identifying indicia such as the application number (see 37 CFR) | rson's Patent Drawing Review (r's Amendment / Comment or in 1.84(c)) should be written on the | the Office action of drawings in the front (not the back) of |
| each sheet. Replacement sheet(s) should be labeled as such in DEPOSIT OF and/or INFORMATION about the departached Examiner's comment regarding REQUIREMENT | osit of BIOLOGICAL MATER | RIAL must be submitted. Note the |
| Attachment(s) 1. ☑ Notice of References Cited (PTO-892) 2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 3. ☑ Information Disclosure Statements (PTO-1449 or PTO/SB. Paper No./Mail Date 3/2/04 4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material | 6. ☐ Interview Sum Paper No./Ma /08), 7. ☒ Examiner's Ar 8. ☒ Examiner's St 9. ☒ Other <u>Attachn</u> | ail Date mendment/Comment atement of Reasons for Allowance ment A: Search History. |
| | RICHARD SUPERVISORY PATE | |

U.S. Patent and Trademark Office PTOL-37 (Rev. 1-04)

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

- 2. The information disclosure statement (IDS) submitted on 3/2/04 was filed same with the mailing date of the present application. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.
- 3. The title of the invention is not descriptive. A new title is changed by the Examiner that is clearly indicative of the invention to which the claims are directed as below the Examiner's Amendment.
- 4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

EXAMINER'S AMENDMENT

5. The application has been amended as follows:

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o Change the title to: "SEMICONDUCTOR MEMORY DEVICE CAPABLE OF REDUCING POWER CONSUMPTION"

o In the Abstract, line 1, delete "The present disclosure relates to a semiconductor memory device."

Allowable Subject Matter

- 6. Claims 1-8 are allowed.
- 7. The following is an examiner's statement of reasons for allowance:

The prior art of record fail to disclose a semiconductor memory device, comprising, in combination with other cited limitations, a control signal generating circuit to generate first, second, and third control signals; a first switch to selectively couple the first terminals of the plurality of sense amplifiers to a power supply voltage terminal in response to the first control signal; a second switch to selectively couple the second terminals of the plurality of sense amplifiers to a ground voltage terminal in response to the second control signal; a third switch to selectively couple the first terminals of the plurality of sense amplifiers to a first charge recycling store in response to the third control signal; and a fourth switch to selectively couple the second terminals of the plurality of sense amplifiers to a second charge recycling store in response to the third control signal as recited in claim 1.

Claims 2-8 are therefore allowed because of their dependency on claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Nguyen whose telephone number is (571) 272-1880. The examiner can normally be reached on Mon-Thu-Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TUANT NOUVEN PATENT EXAMINED

June 28, 2004

Tuan T. Nguyen Patent Examiner Art Unit 2824

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